AMENDMENTS TO THE CLAIMS

Please cancel claims 1-11 without prejudice and disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-11. (canceled).

Claim 12. (new) A modem apparatus operating in accordance with an ADSL system comprising:

a receiver configured to receive an initializing signal utilized for the ADSL system, the initializing signal including a first data unit without a cyclic prefix signal and a second data unit with the cyclic prefix signal, the second data unit being received following the first data unit, the cyclic prefix signal being in front of the second data unit and comprising a same data as data of a data unit portion at a rear of the second data unit;

a sampler configured to sample the received initializing signal in units of a predetermined number of samples, the predetermined number of samples corresponding to one data unit;

a difference calculator configured to calculate a difference between a sample of a present data unit and a sample spaced from the present sample by the predetermined number of samples;

a multiplier configured to square the difference calculated by the difference calculator;

a storage device configured to store a predetermined number of squared difference values, the predetermined number of the squared difference values corresponding to the sampling number of the cyclic prefix signal;

an adder configured to sum the squared difference values stored in the storage device; and

a controller configured to compare the summed value with a predetermined threshold value, to determine that the cyclic prefix signal is detected when the summed value is smaller than the predetermined threshold value, and to detect the second data unit in the initializing signal, based on the detection of the cyclic prefix signal.

Claim 13. (new) The modem apparatus according to claim 12, wherein the controller determines that the cyclic prefix signal is detected, when a second summed value is smaller than the predetermined threshold value after it is determined that a first summed value is smaller than the predetermined threshold value and when an interval between the determinations of the first summed value and the second summed value corresponds to the predetermined number of samples.

Claim 14. (new) The modem apparatus according to claim 12, wherein the controller further counts the number of times that the summed value is smaller than the predetermined threshold value, and determines that the cyclic prefix signal is detected when the counted number of times reaches a predetermined number.

Claim 15. (new) The modem apparatus according to claim 12, wherein the predetermined threshold value is close to zero.

Claim 16. (new) An ADSL terminal side apparatus equipped with the modem apparatus according to claim 12.

Claim 17. (new) An ADSL station side apparatus equipped with the modem apparatus according to claim 12.

Claim 18. (new) A communication apparatus equipped with the modem apparatus according to claim 12.

Claim 19. (new) A communication control method comprising:

receiving an initializing signal utilized for an ADSL system, the initializing signal including a first data unit without a cyclic prefix signal and a second data unit with the cyclic prefix signal, the second data unit being received following the first data unit, the cyclic prefix signal being in front of the second data unit and comprising a same data as data of a data unit portion at a rear of the second data unit;

sampling the received initializing signal in units of a predetermined number of samples, the predetermined number of samples corresponding to one data unit;

calculating a difference between a sample of a present data unit and a sample spaced from the present sample by the predetermined number of samples;

squaring the calculated difference;

storing a predetermined number of squared difference values, the predetermined number of the squared difference values corresponding to the sampling number of the cyclic prefix signal;

summing the stored difference values;

comparing the summed value with a predetermined threshold value;

determining that the cyclic prefix signal is detected, when the summed value is smaller than the predetermined threshold value; and

detecting the second data unit in the initializing signal, based on the detection of the cyclic prefix signal.